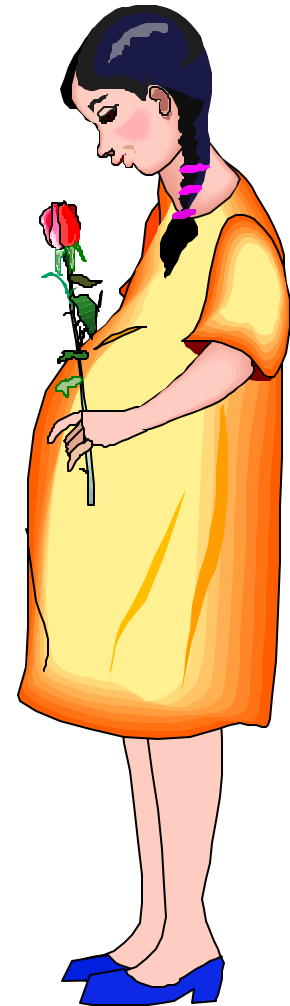
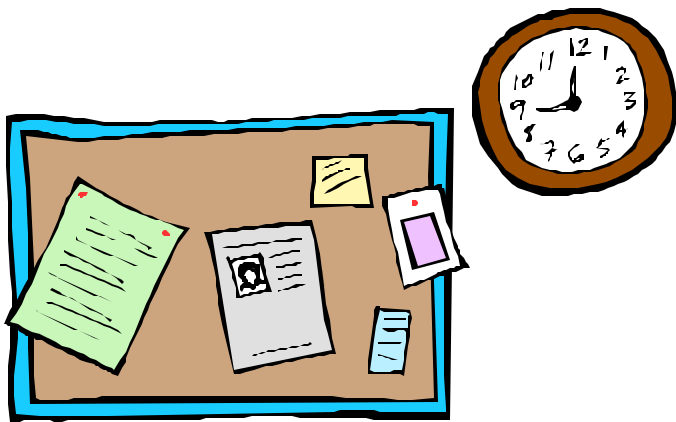




Substance Abuse Treatment for Women of Childbearing Age

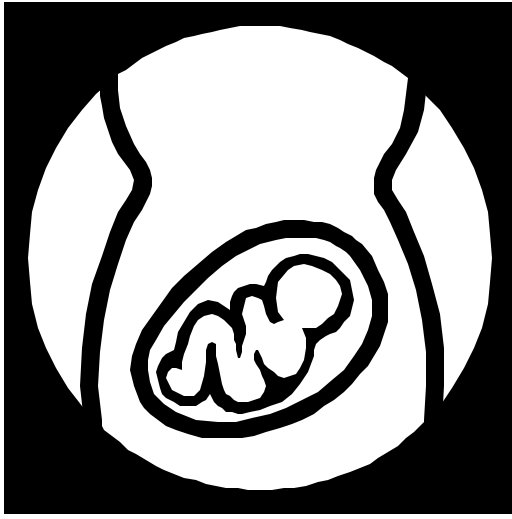
Dace S. Svikis, Ph.D.
Virginia Commonwealth University
March 27, 2003
dssvikis@hsc.vcu.edu





Outline

Background/Epidemiology
Screening/Identification
Education
**Treatment (What works and
what doesn't)**
Future Directions



Prevalence of Substance Use During Pregnancy

(U.S. Metropolitan Areas)

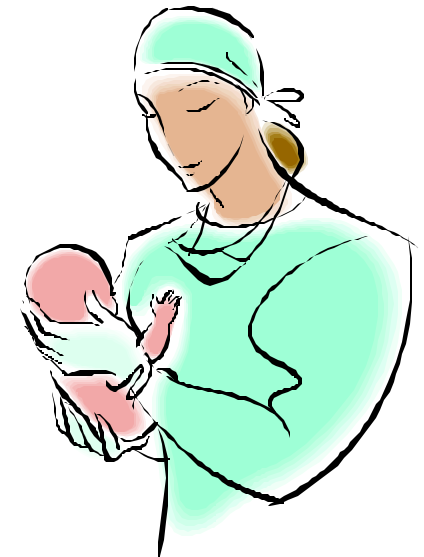
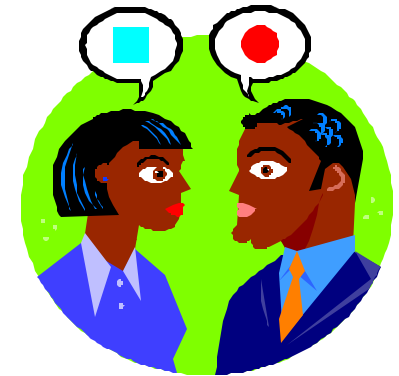
Tobacco	21%
Alcohol	20%
Marijuana	3%
Opiates	2%
Cocaine	1%
Any illicit drug	6%

NIDA/National Pregnancy and Health Survey, 1992

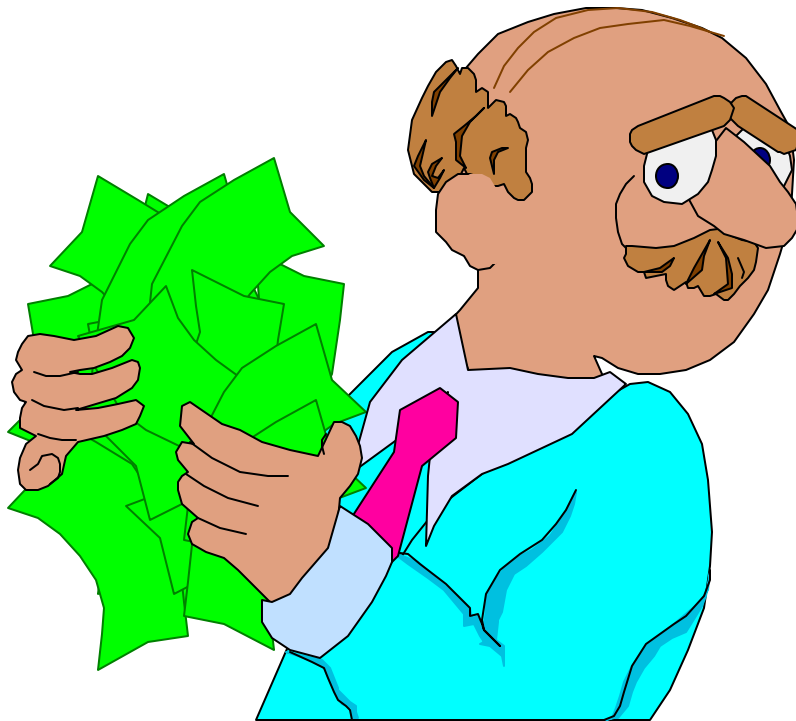
Adverse Consequences of Substance Use/Abuse



- Family Problems
 - Divorce/Separation
 - Parenting Difficulties
- School/Employment Problems
- Medical Problems
- Legal Problems
- Emotional Problems



Consequences to Society



Economic cost to U.S.
society (in billions):

- Drug abuse \$98
- Alcohol abuse \$148

Total: \$246

- This represents a cost of \$965 per person in the U. S.A.

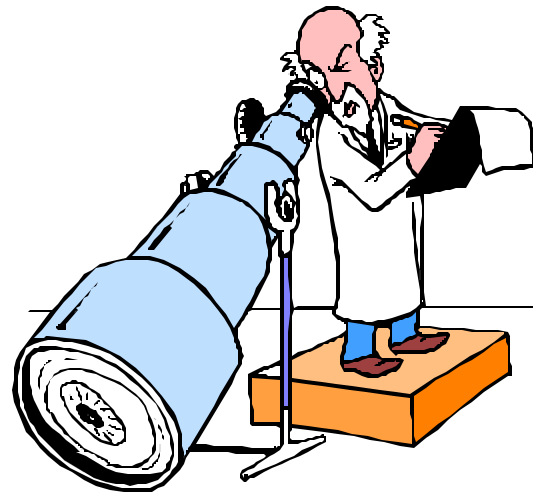
**In the past 15 years,
over 200 women in 30 states
have faced criminal prosecution
for using psychoactive substances during
pregnancy.**



Paltrow et al., 2000

Impact of Such Policies

- Women are reluctant to admit to drug use
- Often avoid situations that increase risk of identification

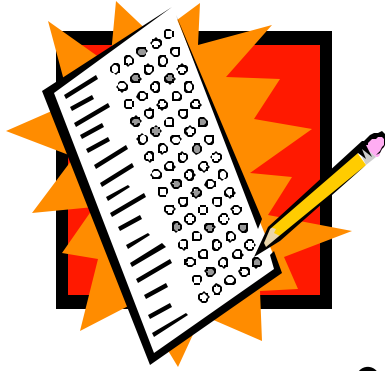




Step 1: Screening

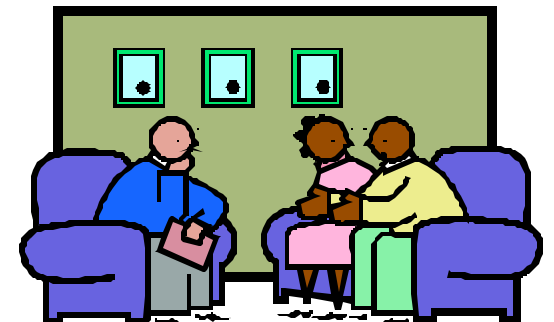
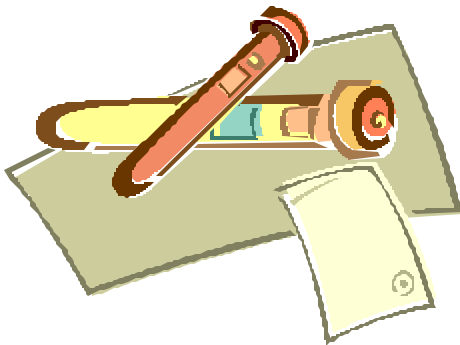
What Does NOT Work?

- **DON'T want to say** "You don't use drugs, do you?"
- **DO want to ask** "How often did you drink alcohol this past week?" and "How often did you smoke marijuana?" and "How many cigarettes do you smoke per day?"



Look for Risk Factors

- Tobacco Use
- Poor work/school performance
- Family history of alcohol/drug problems
- Depression/mood disorders

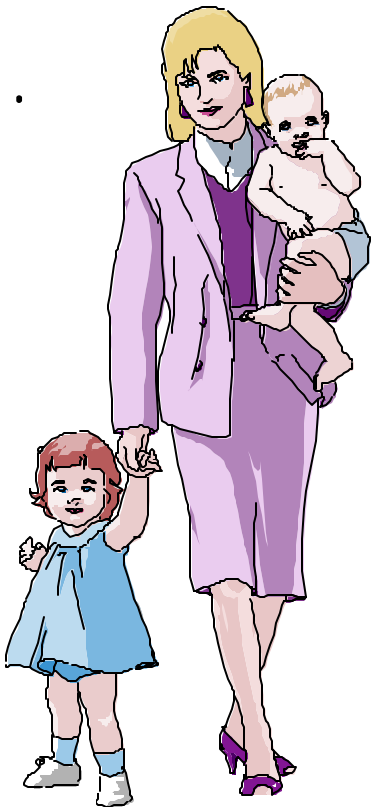


STEP 2: Education



*Prenatal exposure to alcohol is one of the leading causes of mental retardation

* Fetal Alcohol Syndrome/Fetal Alcohol Effects
Growth Deficiency, Facial Malformations, CNS defects, and other organ system malformations



Smoking and Pregnancy

- 20% of low birthweight births
 - 8% of preterm deliveries
 - 5% of perinatal deaths

***COULD BE PREVENTED BY
ELIMINATING SMOKING
DURING PREGNANCY***

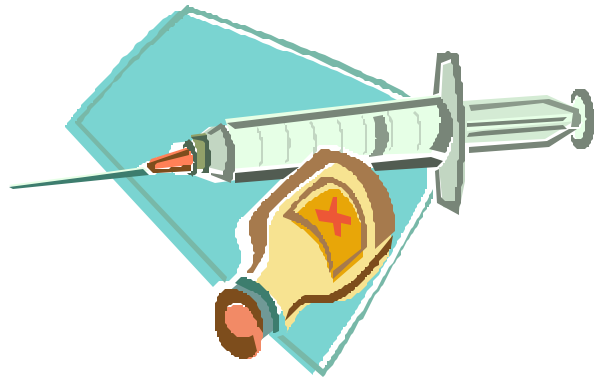


Report to the Surgeon General, 1990



Cocaine

- Malignant hypertension
- Cardiac ischaemia
- Cerebral infarction
- Sudden death
- Premature rupture of membranes (PROM)
- Preterm labor and delivery
- Placenta previa
- Abruptio placentae
- Intrauterine growth restriction (IUGR)
- Meconium stained amniotic fluid
- Teratogenic effect

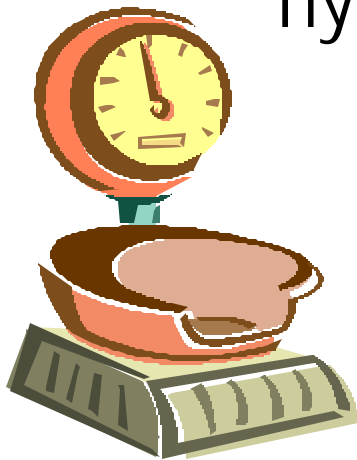


Opioids

- Medical, nutritional, social self neglect
- Infectious diseases (HIV, hepatitis)
- Abscess formation
- Neonatal Abstinence Syndrome (NAS)
- Still birth
- SIDS
- Low birth weight
- Early deliveries
- Bad nutritional status of newborn
- Endocarditis
- Foster care

Most Women Use Multiple Substances

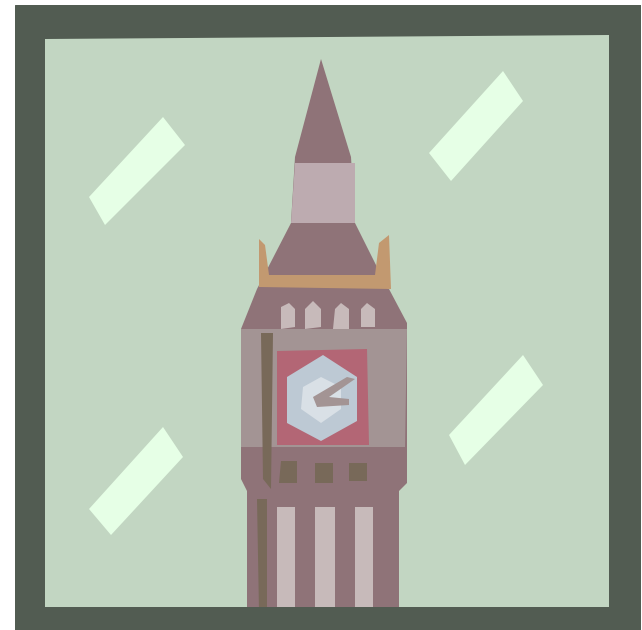
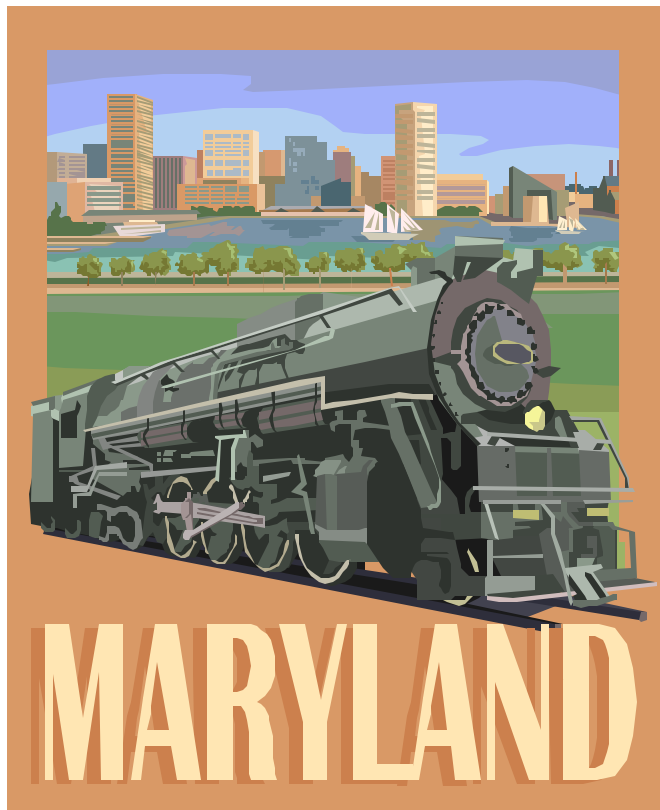
- LOW BIRTHWEIGHT is often critical indicator
 - increases risk for infant mortality
 - important predictor of later outcomes
hyperactivity, learning disabilities, etc.

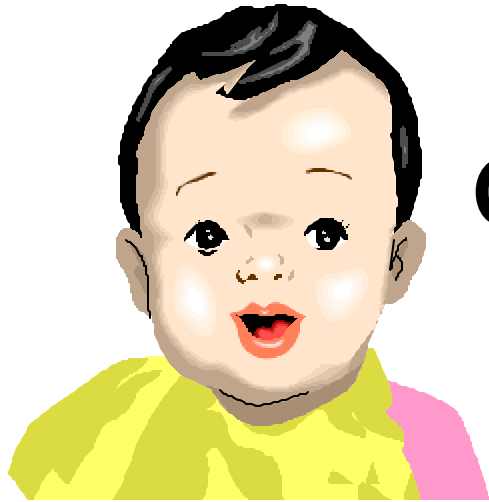


TREATMENT

Baltimore

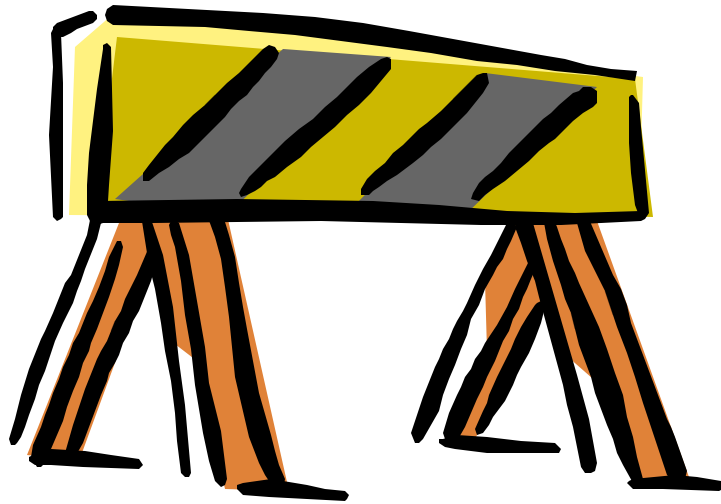
1989





Factors Leading to the Creation of the Center for Addiction & Pregnancy

- Pregnant, drug abusing women fared poorly in standard care settings
- Infants of untreated women often required intensive medical care in hospital NICUs
- Pilot studies integrating OB care with drug treatment offered encouraging results



Barriers to Care

- Unfriendly health care system
- Poorly integrated treatment services
- Male-dominated treatment delivery system
- Lack of transportation
- Limited childcare resources

Interdisciplinary Approach to Care



- Alcohol/drug treatment
- Mental health/psychiatric consultation
- OB/Gyn services and family planning
- Pediatric medical care and on-site childcare
- 24-hr nursing coverage of residential unit

One Stop Shopping

Staffing

- 1 Program Director
- 6 Division Directors (OB/Gyn, Mental Health, Nursing, Pediatrics, Administration, Research)
- 4 CNMs and 1 Obstetrician
- 9 nursing staff (including 3 RNs)
- 1 Developmental Pediatrician
- 4 Childcare workers
- 1 Parenting Coordinator
- 8 Mental Health/Drug Abuse Therapists
- 2 Intake Staff
- 1 Outreach Worker
- 1 Van Driver
- 8 Administrative Staff (registration, billing)
- 1 Medical Records Technician
- 1 Computer/Data Manager
- 1 Abstinence Monitor
- .5 Psychiatrist and other .25-.5 consultants

CAP Treatment



Intake/Assessment

Residential Treatment
(7 days)

Intensive Outpatient
Treatment (Phases I, II and
III)

Phases of Outpatient Treatment

Phase I

7 days/week for 28 days

Phase II

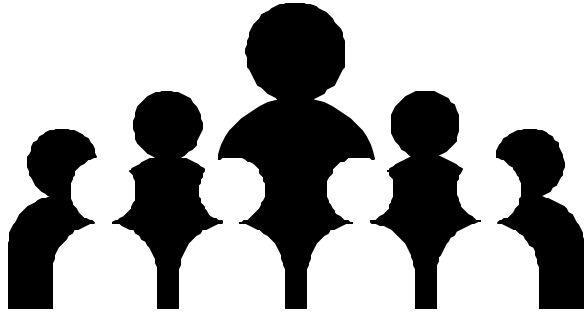
A) *5 days/week for 6 weeks*

B) *3 days/week for 6 weeks*

Phase III

A) *2 days/week for 6 weeks*

B) *1 day/week up to 6-12
mos. postpartum*



Individual and Group Counseling

- * Interdisciplinary Focus
- * Group Leaders included nurse midwives, social workers, mental health counselors, pediatric staff, nurses
- * Representative Topics:

Importance of Prenatal Care

Consequences of Drug Use in Pregnancy

Improving Self-Esteem

Coping with Depression

Relapse Prevention

Parenting Skills Training

Obstetrical Care Plan



- Every pregnancy is treated as “high risk”
- More frequent prenatal care visits
- More frequent NSTs and ultrasound measures
- CNMs work cooperatively with obstetricians
- OB is integral part of the comprehensive care model

Patient Characteristics

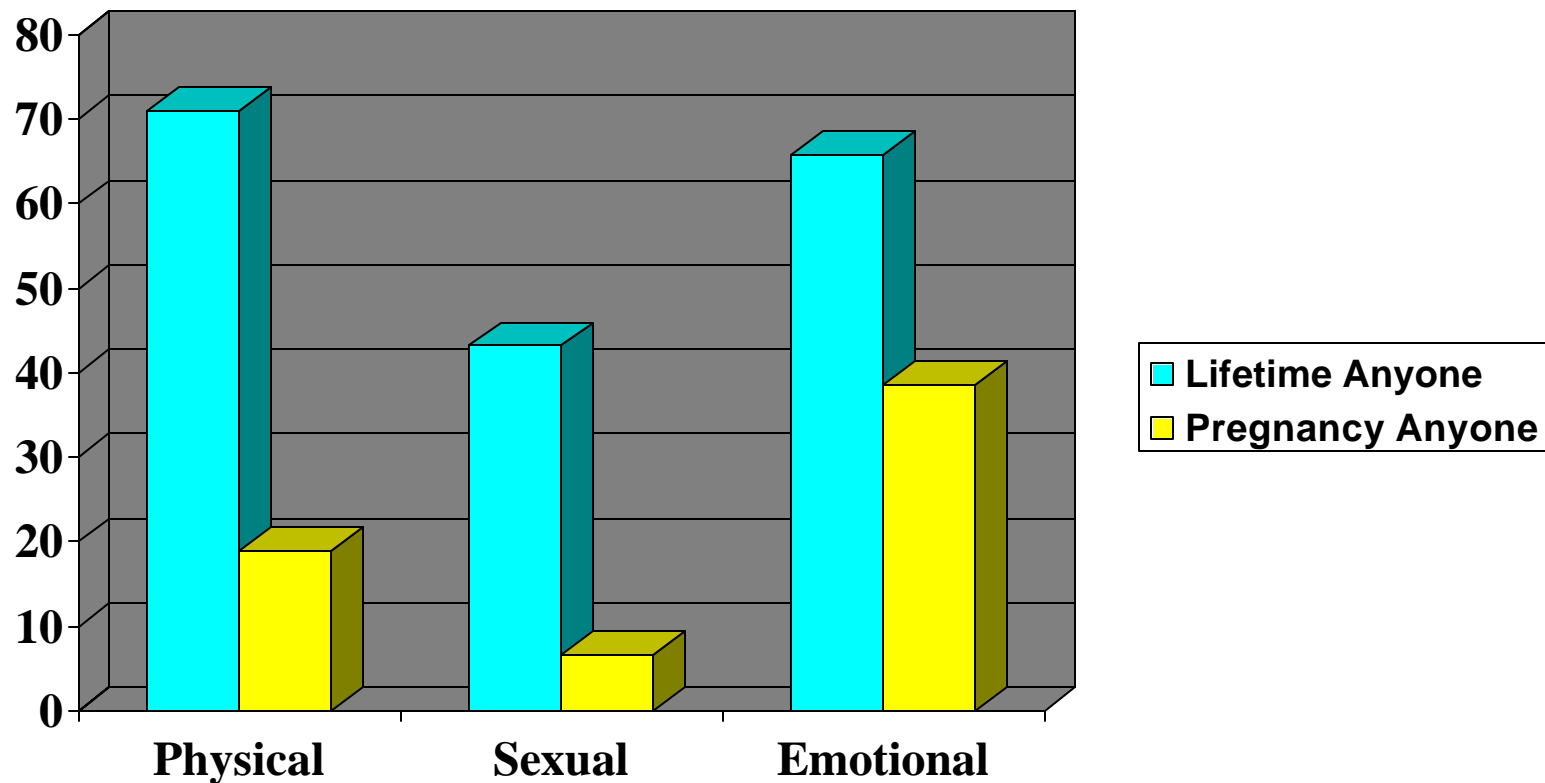
Age	Late 20's
Race	85% African American
Employment	95% Unemployed
Marital Status	75% Single/Never Married
Living Status	33% Homeless
Dependence Diagnoses:	
Opiates	85%
Cocaine	85%
Alcohol	24%

Drug-affected Families



Source: National Training Center, Foundation for Children with AIDS, Boston, Massachusetts, USA

Prevalence of Violence Among Substance Abusing Pregnant Women (n=391)



Velez, 2002

Pharmacotherapy: Methadone Maintenance

- Offered to all opiate-dependent pregnant women on admission
- Viewed as a therapeutic adjunct
- Average dose is 50 mgs
(range 20-80 mgs)



Methadone and Pregnancy

Methadone is a full opioid agonist
that is pharmacologically
similar to morphine

Pharmacological half-life is 24-36 hours

Goals of Methadone Maintenance During Pregnancy

- * Cessation of Illicit Drug Use
- * Stabilization of Intrauterine Environment
- * Increased Compliance with Prenatal Care
- * Enhanced Pregnancy Outcomes

Neonatal Withdrawal From Methadone



Symptoms may be prolonged and severe

They include:

Hyperactivity

Irritability

Sleep Disturbance

Sucking and Swallowing Incoordination

Promising Alternative: Buprenorphine

Clinical Outcome Research

Does treatment work?



Treatment Sample

N=100 pregnant drug abusing women who gave birth while enrolled in CAP program

Untreated Control Sample

N=46 pregnant drug abusing women who did not enter drug treatment during pregnancy

Maternal and Infant Outcome at Delivery

Measure	Treated (n=100)	Controls (n=46)	p-value ¹
Maternal Drug Toxicology (% positive)	36.8	63.2	<.001
Estimated Gestational Age (mean weeks)	38.6	35.4	<.001
Birthweight (mean grams)	2934	2539	<.001
% < 2500 Grams	15	39	<.001
% < 1000 Grams	0	4	<.001
Apgar Score (mean score)			
1 Minute	7.7	6.8	.004
5 Minutes	8.8	8.5	.004
NICU Admission ¹ (% of all subjects)	10	26	.01

¹Adjusted for initial group differences in age, education, and cocaine use

² Neonatal Intensive Care Unit

Clinical Efficacy

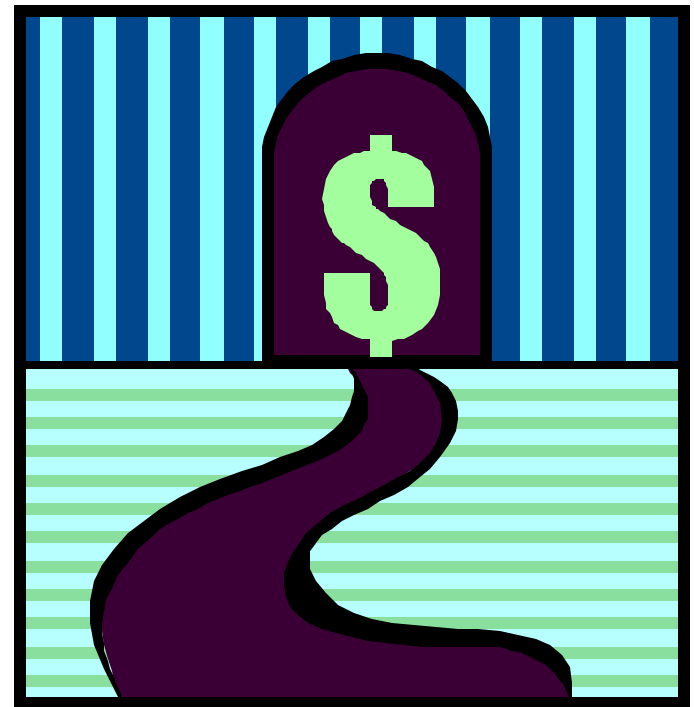


Higher Infant Birthweight
Longer Estimated Gestational Age
at Delivery
Higher Rates of Drug Abstinence at
Delivery
Better Infant Apgar Scores



Economic Efficacy

Is this Model of
Care
Cost-Effective?

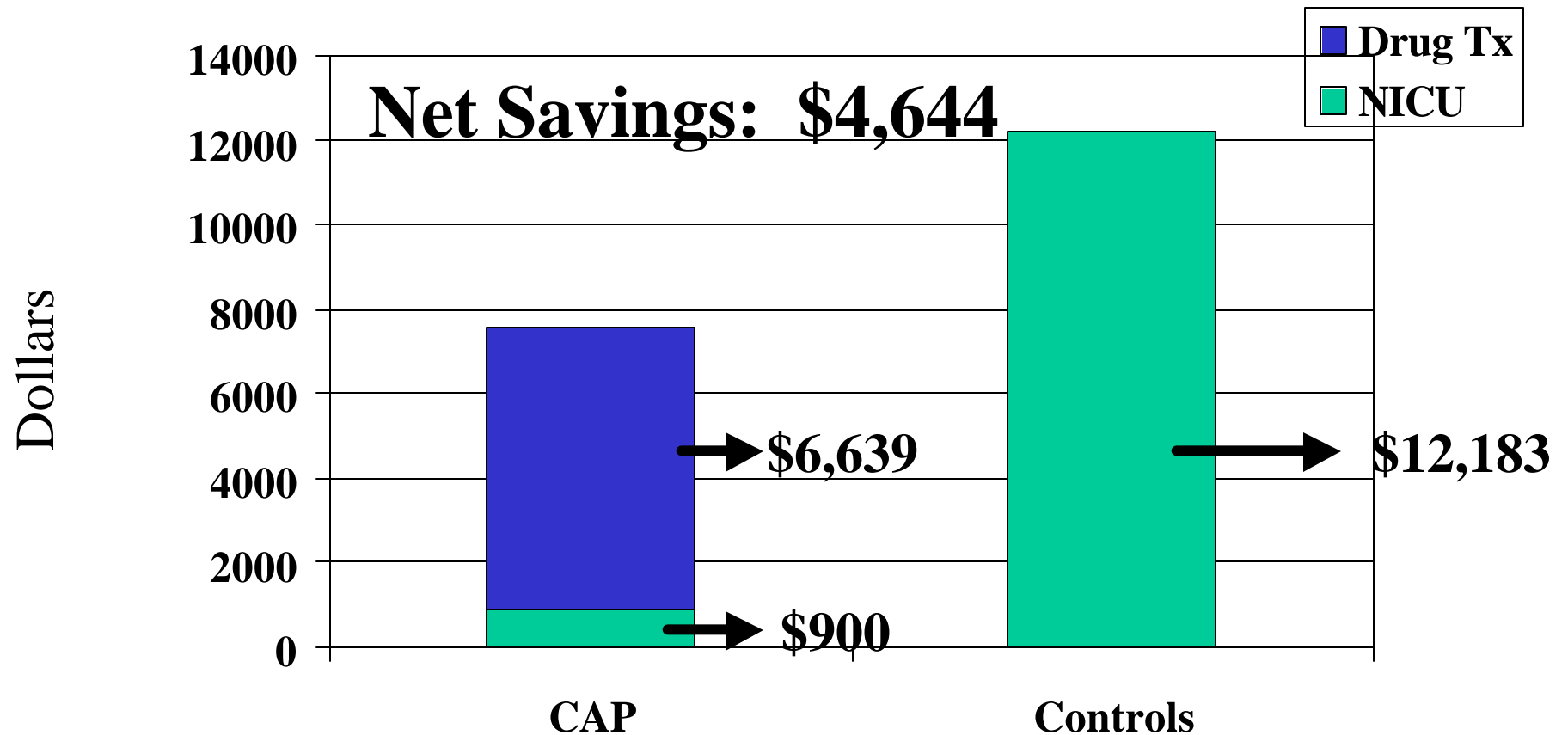


NICU -Related Costs for Treated and Untreated Pregnant Drug Abusing Women

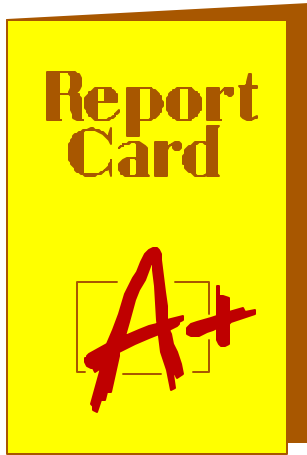


	CAP Treatment <u>Sample</u>	Untreated <u>Sample</u>	p-value
Average NICU Cost per infant (all infants)	\$900	\$12,183	.002
Average NICU Cost per infant (NICU admissions only)	\$7,500	\$46,700	.03

Center for Addiction and Pregnancy



(Svikis et al., 1998)



1995 Baltimore "Report Card"

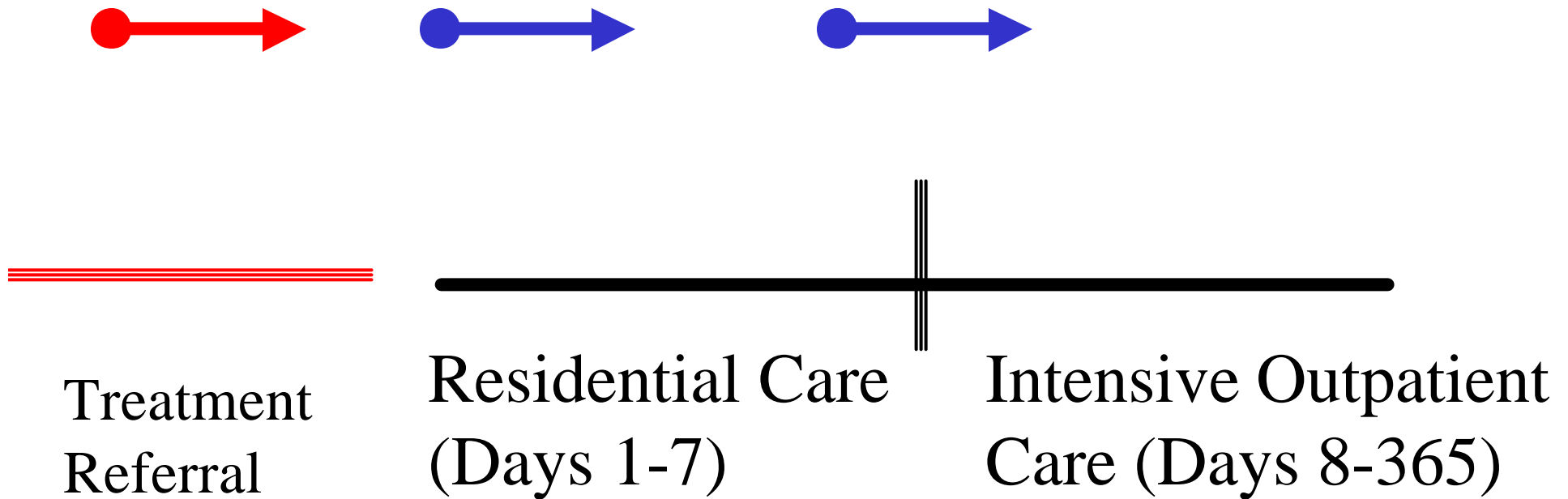
*Should Comprehensive One-Stop
Shopping Programs Get an "A+"???*

NO..

Because there is:

Much Room for Improvement
One-Stop Shopping may be
economically impractical

Room for Improvement





THE FANTASY

**Women recognize
they have a Problem**

**They Know they Need Help
with that Problem**

**They Want Treatment and
Are Ready for Change**

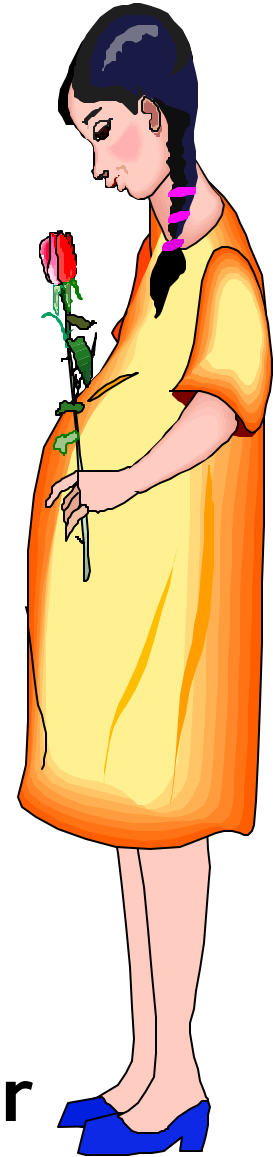


Reality

Many pregnant women who abuse drugs do **NOT** want treatment

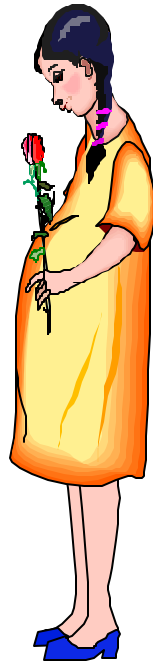
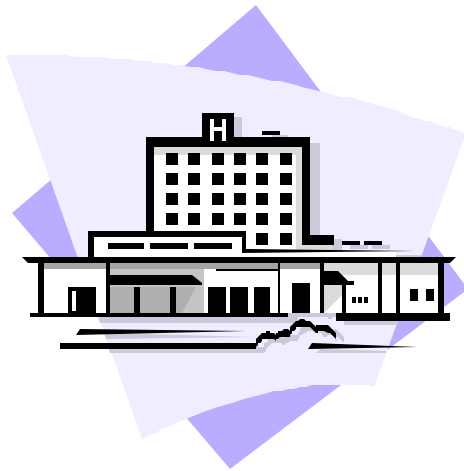
Some feel unable to STOP

Some fear admitting they have a problem will lead to loss of their baby, incarceration, etc.



Negative Consequences of Drug Use

Treatment



Ambivalence

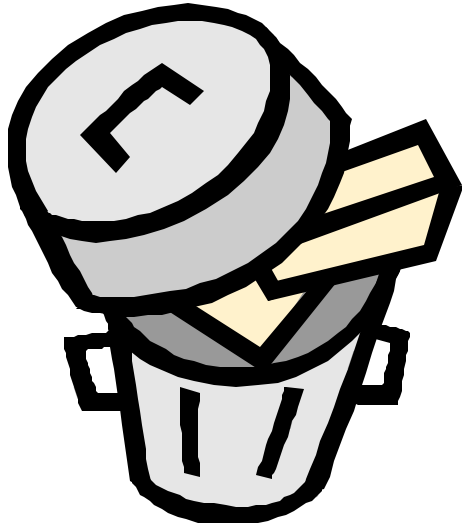
Some women enter treatment

**Some women
refuse
Treatment and
continue to
use drugs**

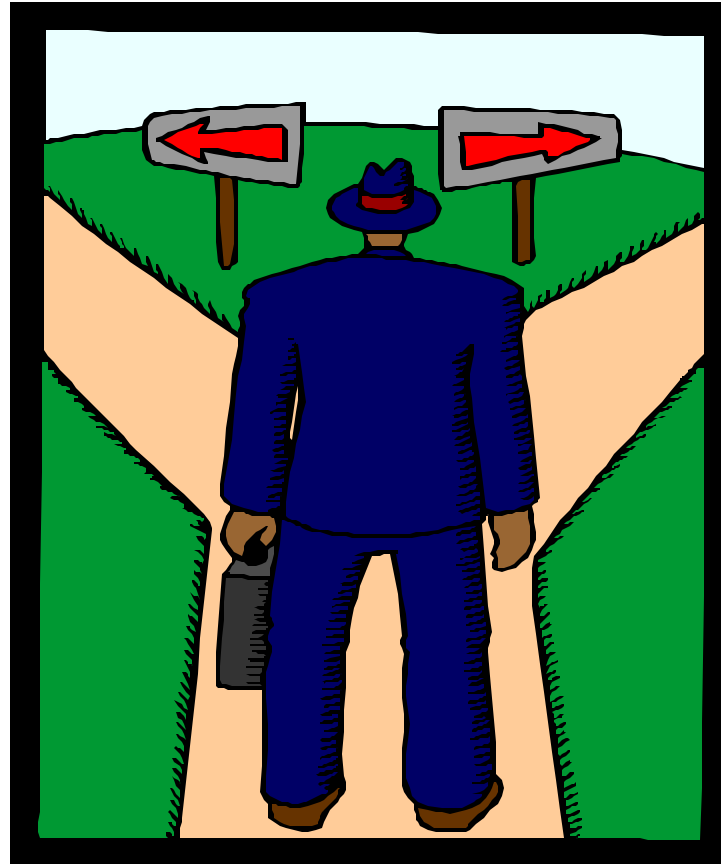


Some women
Go to
Treatment
but then
drop out and
relapse

Methods are needed to:



**Continued
Drug Use**

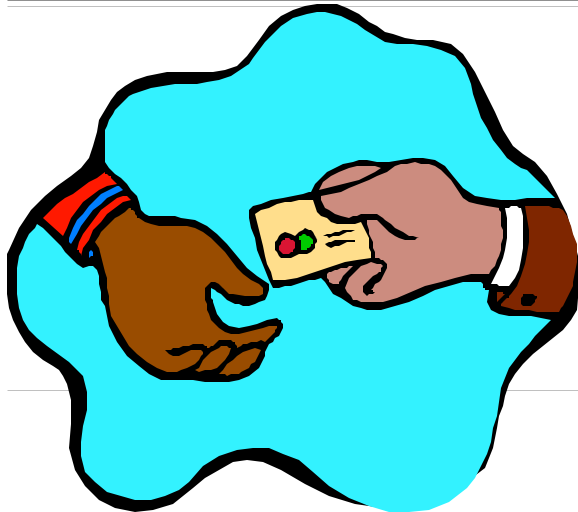


**Drug
Abstinence**

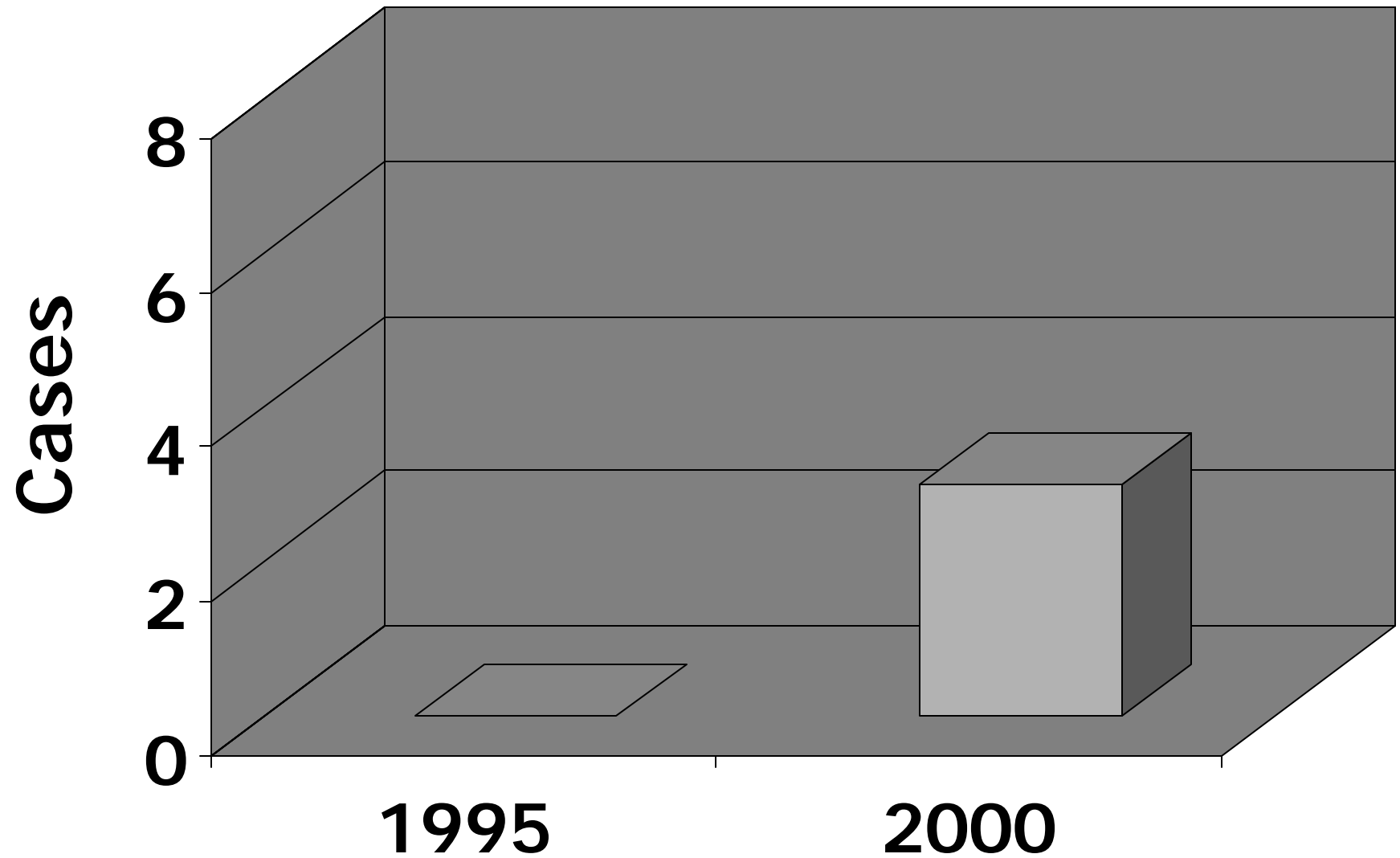
- **counteract ambivalence**
- **increase motivation for change**

Shifting Ambivalence in the Direction of Change

Motivational Interviewing
and/or
Behavioral
Incentives

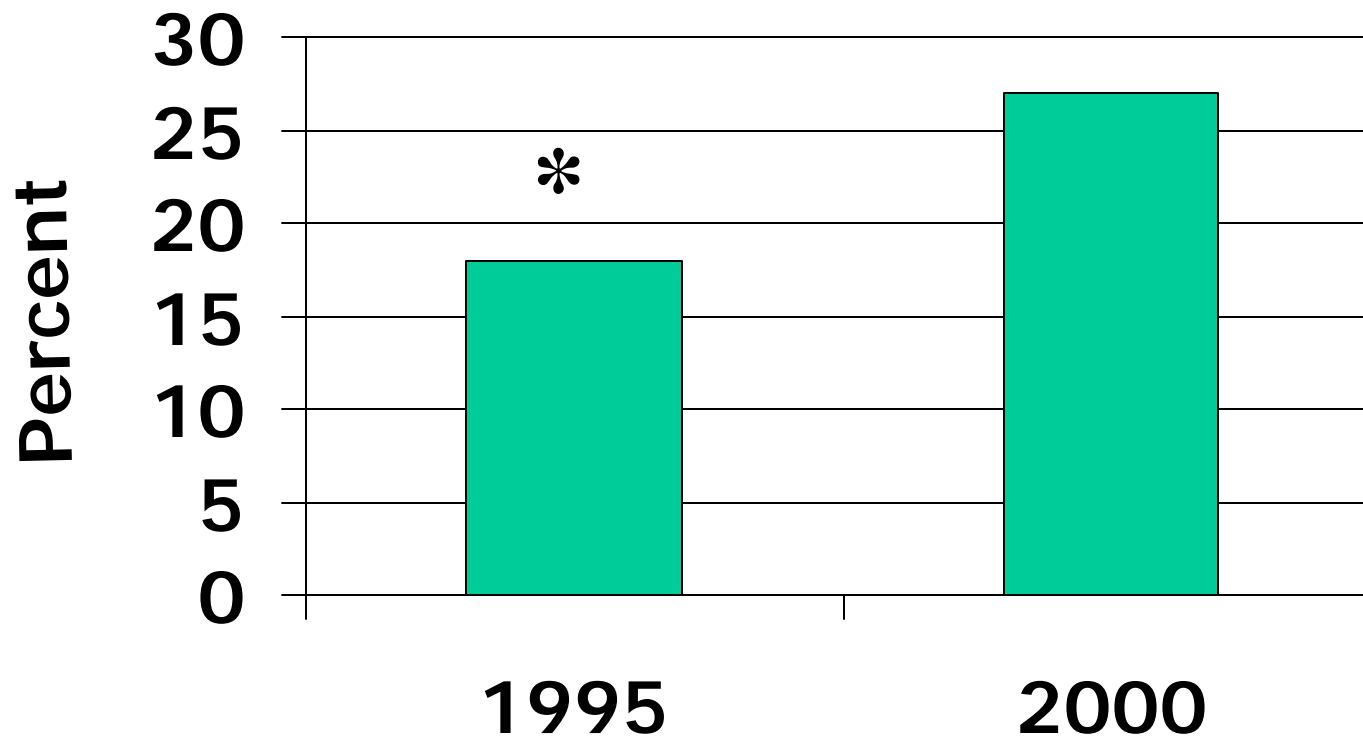


Infant Deaths



Jansson et al., 2002

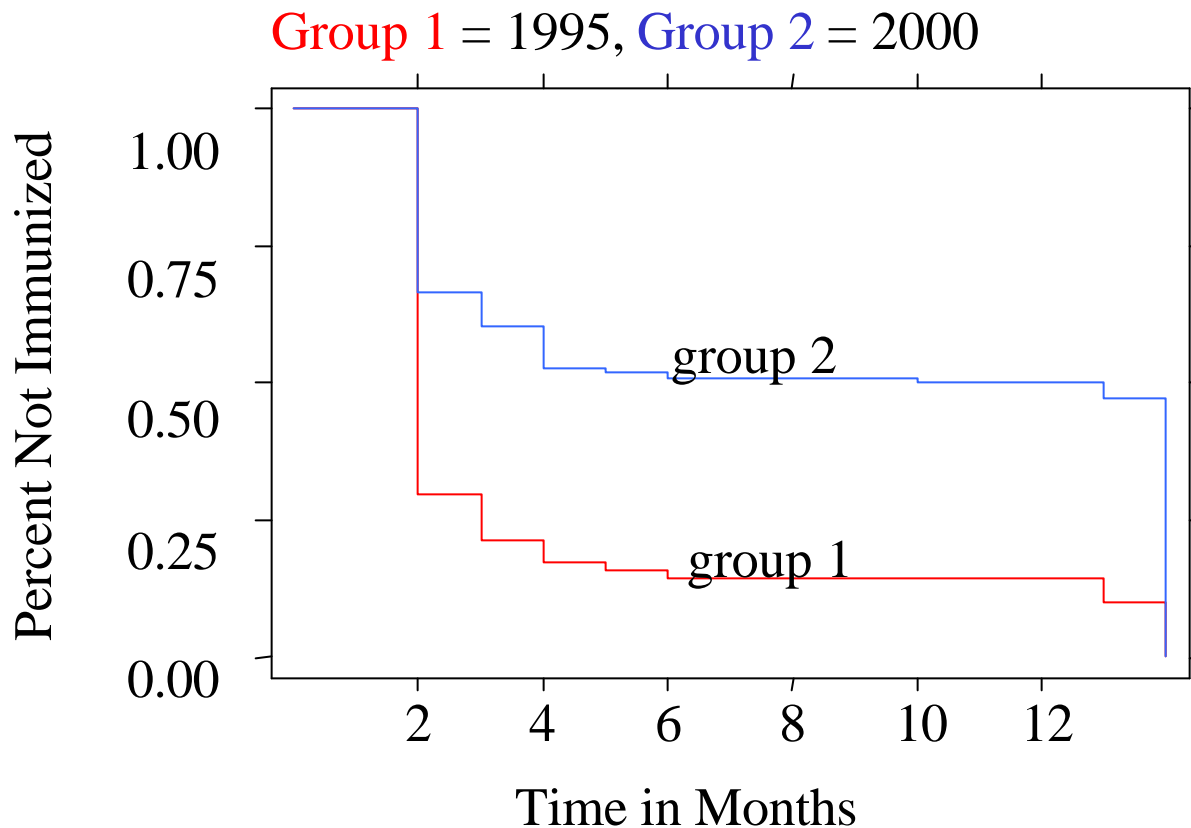
Child Protective Services Interventions by 6 months of age



* $p < .05$

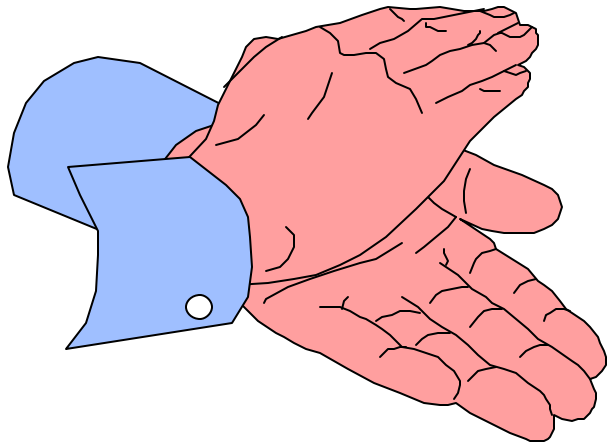
Childhood Immunizations

Kaplan-Meier Survival Curves for 2 month immunizations



Chi-square = 47.67; df = 1; $p < 0.0001$





CAP THANK YOU LIST

Carol Ball, R.N.

George Huggins, M.D.

Archie Golden, M.D.

Chester Schmidt, M.D.

Lauren Jansson, M.D.

Preston Gazaway, M.D.

Pat Paluzzi, C.N.M.

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Nancy Haug, M.A.

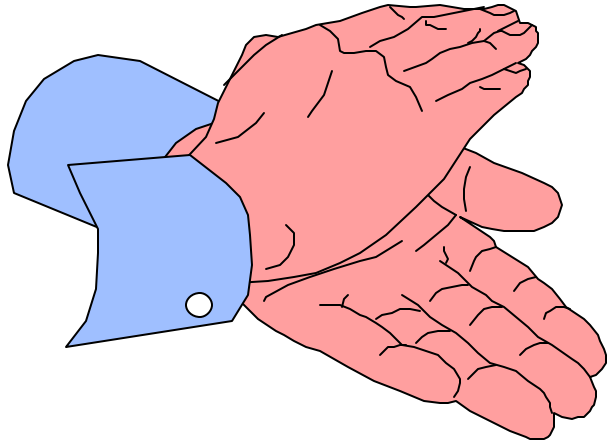
Michelle Tuten, LCSW

Vickie Walters, LCSW

Michelle Leff, M.D.

Beth Marchiano, B.A.

Martha Velez, M.D.



JOHNS HOPKINS THANK YOU LIST

Lauren Jansson, M.D.

Betsy McCaul, Ph.D.

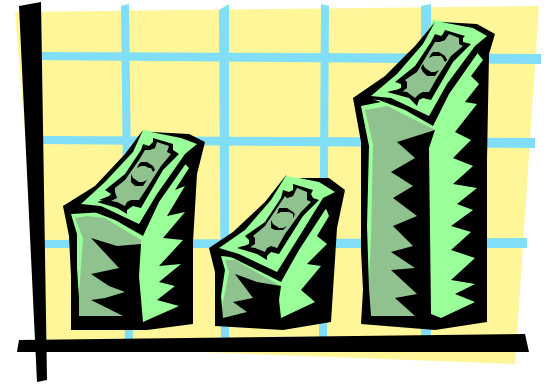
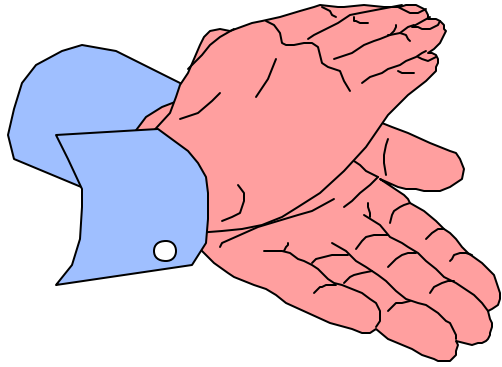
Maxine Stitzer, Ph.D.

Robert Brooner, Ph.D.

Hendree Jones, Ph.D.

Kenneth Silverman, Ph.D.

Ed Johnson, Pharm.D.



Institutional Funding THANK YOU LIST

National Institute on Drug Abuse

National Institute on Alcohol

Abuse and Alcoholism

***National Institute of Child Health
and Development***